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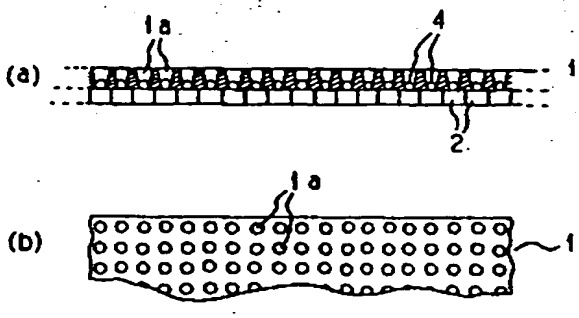
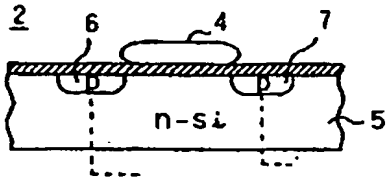
TITLE : SYSTEM FOR MEASURING HYPOPLASIA AND ACTIVATION OF LYMPH CELL





ABSTRACT : PURPOSE: To measure continuously the hypoplasia (activation) time by using field effect transistors (FET) the surfaces of which are electrified to positive charge by a poly L-lysine treatment or the like and detecting electrically the hypoplasia (activation) reaction of a lymph cell.

CONSTITUTION: A plate vessel 1 is provided with many apertures 1a which are arranged in a matrix, and many FETs 2 are arranged in the bottoms of the apertures. The FETs 2 have no gate electrodes and the surface of a gate insulation film 3 is electrified positive by a poly L-lysine treatment. When a lymph cell having negative charge by hypoplasia or activation sticks thereon by electrostatic force, a p channel is formed on the surface of an n type silicon substrate 5. The channel size of each FET2 is made about the same as the diameter of the lymph cell 4, and when the lymph cell is deposited thereon and reacts with a hypoplasia material such as PHA, PWM or the like, the source-drain current of the FET4 changes and the reaction is detected. The time for the hypoplasia and activation is thus measured.